



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

remote time, submerged, but has become narrowed down through the same agency from different directions. Being guided by the manner in which the implements were found, and other meagre evidence, one would suppose them to date back to the lacustrine period, but in this we find difficulties which can be explained in answer to the third point.

The difference in elevation between this locality and that on the banks of the Schuylkill river (as well as that on the Eastern Branch) is too great for them to have been occupied simultaneously, unless we throw out the suggestion of a lacustrine period. Acting upon this, the matter becomes more comprehensible, from which may be deduced the following propositions, viz :

1st. That the three localities were occupied by a similar people, at or nearly at the same time.

2d. That these people lived chiefly upon fish, as is inferred from the implements which, under *ordinary* circumstances, would be worthless in the chase.

3d. That these typical forms of rude workmanship, indicate greater antiquity than we find represented in the rudest forms of Indians who subsequently occupied the same localities. And—

4th. That the position of some of the implements in the stratified drift, and their relation in this respect to the location of modern relics, indicates an indefinite lapse of time from the disappearance of this primitive race to the appearance of the Indians proper, whose rudest forms of workmanship are found near or upon the surface.

—:O:—

RECENT LITERATURE.

BREHM'S ANIMAL LIFE.¹—The volumes that have been previously noticed of the series, have related to the vertebrate animals, which are naturally in a work of a thoroughly popular character such as this, treated of at much greater length than the invertebrates. The present volume has been written by Prof. Oscar Schmidt, of the University of Strasburg, who is distinguished for his knowledge of the structure and mode of development of the lower animals.

This volume begins with the Crustacea, and descends through

¹ *Brehm's Thierleben*. Allgemeine Kunde des Thierreichs. Grosse Ausgabe. Zweite umgearbeitete und vermehrte Auflage. Vierte Abtheilung. Wirbellose Thiere. Zweite Band. Die Niederen Thiere. Von Dr. OSCAR SCHMIDT. Krebse, Würmer, Weichthiere, Stachelhäuter, polypenartige Thiere, Urthiere. Mit 366 Abbildungen im Text und 16 Tafeln, von JOHANNA SCHMIDT, EMIL SCHMIDT und ROBERT KRETSCHMER. Leipzig, Verlag des Bibliographischen Instituts, 1878. 11 Parts. 40 cents a part, for sale by B. Westermann & Co., New York.

the worms to the Mollusca, the Echinoderms and the Cœlenterates to the Protozoa. While we cannot agree with the learned author in some of his views on classification, the reader may be sure that the volume is a careful and reliable presentation of the more interesting facts regarding these creatures, and which should be the property

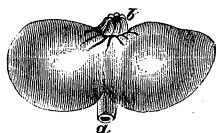


FIG. 1.—*Sacculina carcini*. Natural size.

of every well informed person.

In these days one can hardly be considered as liberally educated, who is not conversant with the physical theories as to the origin of the different forms of life; and as there are several avenues which lead up to the Vertebrates from the lower animals, no wonder that a knowledge of the lower animals, especially the groups described and figured in this volume, is quite requisite. It should be said, however, that the anticipation of vertebrate characters discoverable in the Ascidians, the Worms and the Molluscs, are recondite, and only appreciable after care-

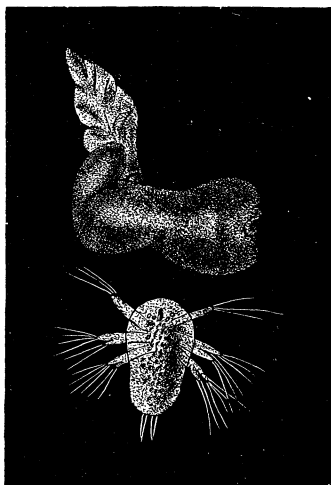


FIG. 2.—*Peltogaster curvatus*; beneath is the larva or nauplius of *Parthenopea*, magnified 200 times.

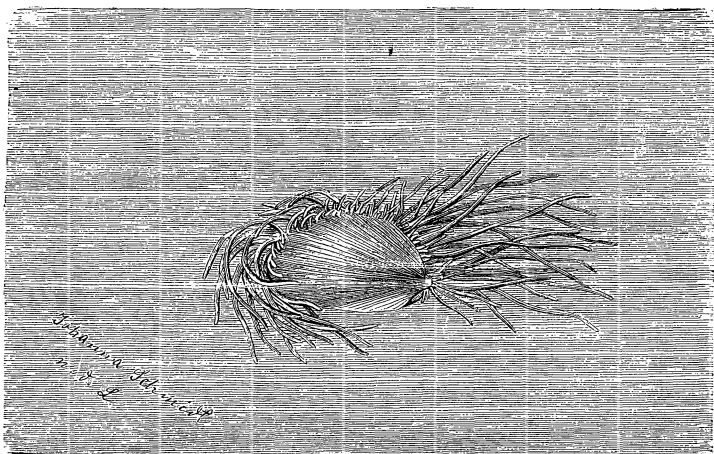


FIG. 3.—*Lima* flying through the water by opening and shutting its valves.

ful embryological and anatomical studies. This subject is only incidentally referred to by Prof. Schmidt, and perhaps the introduction of too many anatomical cuts and schematic drawings would be considered as out of place in such a work as this.

As it stands, the volume before us is superbly illustrated, and to American students, as we have previously remarked, who may read German with difficulty, the book will be a store-house of admirable studies from nature of the leading types of animal life.

Many new wood-cuts are added in this second edition; some of these were drawn by Prof. Schmidt's daughter, Johanna, who spent a winter in Dr. Dohrn's Zoölogical Station at Naples, observing and drawing the animals kept alive in the mag-

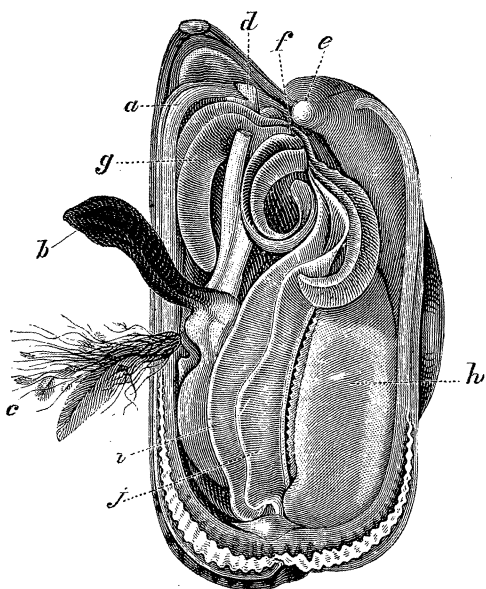


FIG. 4.—Anatomy of the Mussel.

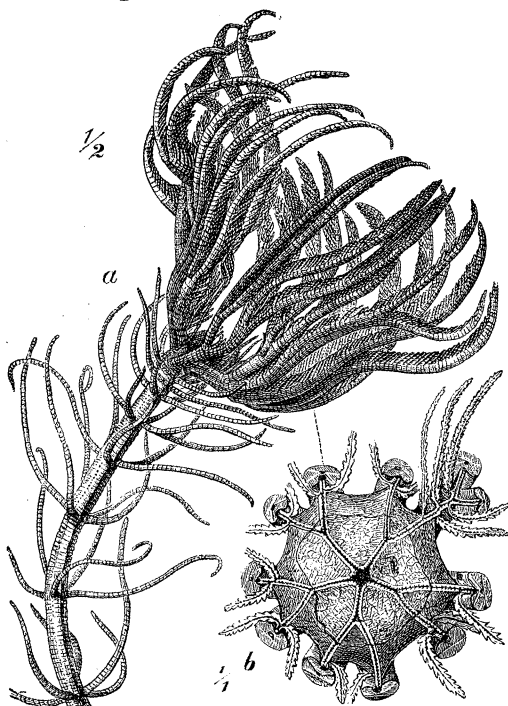


FIG. 5.—*Pentacrinus caput-medusæ*. One-half natural size. *b*, the calyx of the same seen from above with the arms cut off. Natural size.

nificent aquarium of that institution, which has proved such a benefaction and stimulus to working naturalists in Europe. The

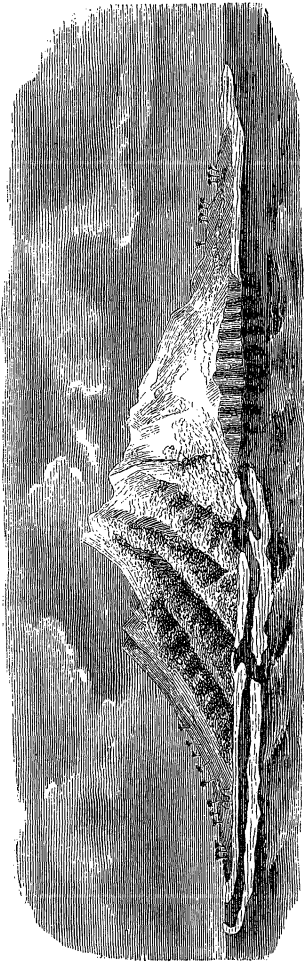


FIG. 6.—High Island with a barrier and fringing reef.

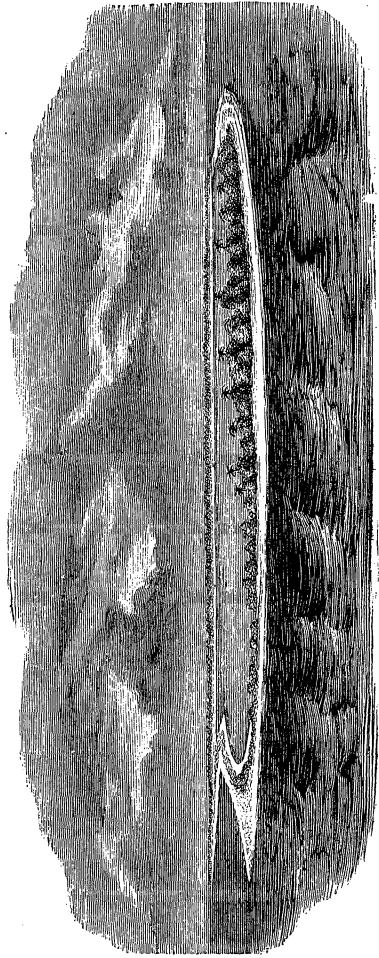


FIG. 7.—Coral Island or Atoll.

author has also been aided by Dr. Simroth, well known for his anatomical studies on the invertebrates, especially the Echinoderms.



FIG. 8.—Section through a coral reef.

As an example of the mode of treatment of his subject we may refer to the account of the Hydroid polyps and coral polyps.

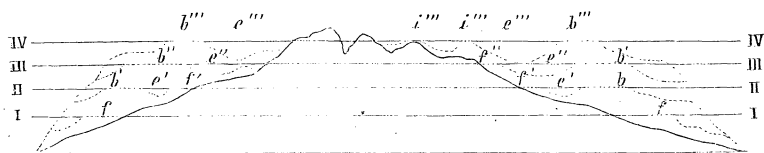


FIG. 9.—Schematic section through an island, indicating the different steps in the formation of an atoll.

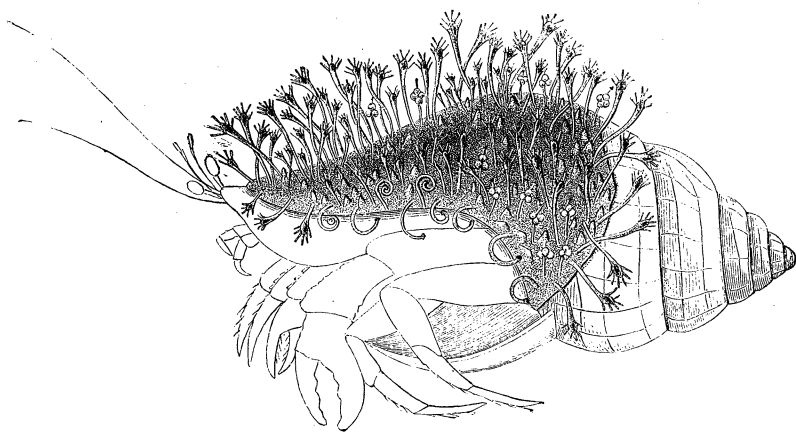


FIG. 10.—Colony of *Hydractinia echinata* on a *Buccinum* shell inhabited by a hermit crab. Natural size.

The *Hydractinia*, jelly fishes and other forms that lead up to the Anthozoa or genuine polyps, are discussed, and the latter are fully described, and their mode of development as originally worked out by Lacaze-Duthiers and Haeckel, as well as the that of Halcyonoid polyps and sea-pens. A lengthy chapter is devoted to the subject of coral reefs and coral islands, based on the researches of Darwin, Dana, Ehrenberg and other naturalists. The accompanying illustrations will convey an idea of the mode of pictorial treatment.

Of the full-page illustrations those of the Octopus or Kraken, the paper Nautilus, the group of Holothurians, are especially noteworthy. In conclusion we can only praise in the highest terms this great work, the preparation of which has been entrusted

to some of the best men in Germany, who combine with a thorough

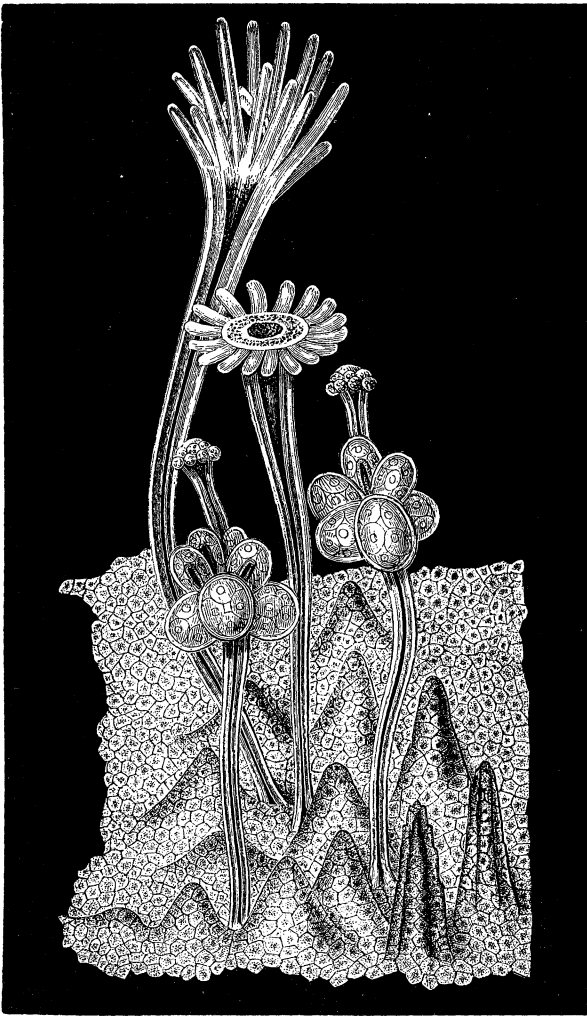


Fig. 11.—Group of a female colony of *Hydractinia echinata*. Enlarged.

special knowledge, the art of setting forth in an interesting and attractive way the history of animal life.

TENTH ANNUAL REPORT OF THE UNITED STATES GEOLOGICAL AND GEOGRAPHICAL SURVEY, F. V. HAYDEN IN CHARGE.¹—This

¹ *Tenth Annual Report of the United States Geological and Geographical Survey of the Territories, embracing Colorado and parts of adjacent Territories.* Being a Report of progress of the Exploration for the year 1876. By F. V. HAYDEN, U. S. Geologist. Washington, 1878. 8vo, pp. 546, with many maps and plates.